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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/649,228	10/22/2003	Yasunori Fukumitsu	59807(47793)	6198
21874	7590	02/16/2006	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			FRANKLIN, RICHARD B	
			ART UNIT	PAPER NUMBER
			2181	
DATE MAILED: 02/16/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/649,228	Applicant(s) FUKUMITSU ET AL.	
	Examiner Richard Franklin	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 5 have been examined.

Response to Arguments

2. Applicant's arguments filed 14 November 2005 in regards to claims 1 and 5 have been fully considered but they are not persuasive.

As per Applicants argument to the rejection of claims 1 and 5, Applicant asserts that Lapstun does not teach or suggest storing liquid ejection data in one side of the buffer areas and transferring liquid ejection data stored in the other side of the buffer areas to an external memory, being synchronized with the same operation clock.

As per the argument to claims 1 and 5, the Examiner disagrees. Lapstun teaches storing liquid ejection data in one side of the buffer areas and transferring liquid ejection data stored in the other side of the buffer areas to an external memory (Lapstun; Figure 27 Lines 9 – 25). At lines 10 – 12 of column 37, Lapstun discloses, ***"While one line is being loaded into the first buffer 213, the pre-loaded line in the second buffer 214 is being read in Memjet dot order (emphasis added)."*** It is clear from the teachings of Lapstun that liquid ejection data is stored on one side of the buffer while liquid ejection data stored on the other side of the buffer is transferred to an external memory.

In response to applicant's argument that the reference fails to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the operation described above is synchronized with the same operation clock) are

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not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Therefore, the rejection of Claims 1 and 5 is maintained.

3. Applicant's arguments, see Page 9 – 11, filed 14 November 2005, with respect to claims 2 – 4 have been fully considered and are persuasive. The rejection of claims 2 – 4 has been withdrawn.

Terminal Disclaimer

4. The terminal disclaimer filed on 14 November 2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/649,578 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Lapstun et al. US Patent No. 6,687,022 (hereinafter Lapstun).

As per claim 1, Lapstun teaches a decode circuit which can perform hardware development on liquid ejection data compressed to be capable of line development (Figure 19, Col 28 Line 19 – Col 33 Line 41);

a line buffer for storing the liquid ejection data developed by the decode circuit by word unit (Figures 29 – 32 Items 213 and 214, Col 37 Lines 9 – 25);

and a compressed data inputting unit for transferring liquid ejection data compressed to be capable of line development from an external part to the decode circuit (Figure 19, Col 28 Lines 21 – 25);

wherein the line buffer comprises two (2) faces of buffer areas in order to store developed data of predetermined words, the liquid ejection data developed by the decode circuit is sequentially stored in a first face of the buffer areas; while the liquid ejection data developed by the decode circuit is sequentially stored in a second face of the buffer areas when the developed data of the predetermined words is accumulated (Figure 29; Col 37 Lines 9 – 25);

and the liquid ejection data developed by the decode circuit is stored in a first face of the buffer area one word each, while the liquid ejection data already developed in a second face of the buffer areas is simultaneously transferred to an external memory one word each (Figure 26, Col 37 Lines 9 – 25).

As per claim 5, Lapstun teaches the devices described per claim 1 used in a liquid ejecting apparatus (Figures 2 – 8).

Allowable Subject Matter

6. Claims 2 – 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: Claims 2 – 4 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claim because the prior art of record fails to teach or suggest alone or in combination both an operation of sequentially storing developed data of one word into a first face of the line buffer and an operation of DMA-transferring data already developed in a second face of the buffer area to the external memory one word each are simultaneously performed per one clock synchronized with an operation clock as required by claim 2 ***in combination with other recited claim limitations***. Newly cited Catlin et al. US Patent No. 6,526,518 (hereinafter Catlin) teaches both an operation of sequentially storing developed data of one word into a first face of the line buffer and an operation of transferring data already developed in a second face of the buffer area to the external memory one word each are simultaneously performed per one clock synchronized with an operation clock (Catlin; Figures 7A – 7C, Col 10 Lines 47 – 53). However, Catlin is silent on performing these operations in a DMA environment.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Catlin et al. US Patent No. 6,526,518 is pertinent for the reasons stated above.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Franklin whose telephone number is (571) 272-0669. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard Franklin
Patent Examiner
Art Unit 2181



KIM HUYNH
SUPERVISORY PATENT EXAMINER
2/10/06